

MARKED-UP COPY OF AMENDMENTS TO SPECIFICATION

In the specification:

Paragraph [0150] has been amended as follows:

[0150]

Table 7E (size 3-0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.292 mm)
cut angle Θ	degrees	166	1.651	not applicable
cut depth D	mm	0.107	0.007	0.37
cut length L	mm	0.443	0.042	1.52
cut distance P	mm	0.956	0.079	3.27
spirality angle α	degrees	not tested	not applicable	not applicable

Table 7F (size 3-0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.292 mm)
cut angle Θ	degrees	164	2.055	not applicable
cut depth D	mm	0.106	0.006	0.36
cut length L	mm	0.395	0.042	1.35
cut distance P	mm	0.959	0.074	3.28
spirality angle α	degrees	7.329	0.547	not applicable

Table 7G (size 3-0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.292 mm)
cut angle Θ	degrees	165	1.031	not applicable
cut depth D	mm	0.104	0.009	0.36
cut length L	mm	0.390	0.035	1.34
cut distance P	mm	0.975	0.103	3.34
spirality angle α	degrees	7.258	0.636	not applicable

Table 7H (size 2-0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.381 mm)
cut angle Θ	degrees	160.2	1.320	not applicable
cut depth D	mm	0.152	0.019	0.40
cut length L	mm	0.449	0.057	1.18
cut distance P	mm	0.944	0.098	2.48
spirality angle α	degrees	9.40	1.606	not applicable

Table 7I (size 2-0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.381 mm)
cut angle Θ	degrees	161.0	1.707	not applicable
cut depth D	mm	0.158	0.014	0.41
cut length L	mm	0.489	0.054	1.28
cut distance P	mm	0.962	0.054	2.52
spirality angle α	degrees	7.96	1.075	not applicable

Table 7J (size 2-0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.381 mm)
cut angle Θ	degrees	161.0	1.506	not applicable
cut depth D	mm	0.154	0.017	0.40
cut length L	mm	0.474	0.058	1.24
cut distance P	mm	0.973	0.068	2.55
spirality angle α	degrees	6.53	1.755	not applicable

Additional measurements were performed on several other twist cut, multiple spiral, barbed sutures manufactured from monofilament spun from polydioxanone and having a diameter of about 0.018 inch (about 0.457 mm, which is slightly more than the USP requirement for a size 0 synthetic absorbable suture) and thus similar to the above-described tested barbed sutures, except that these other barbed sutures were cut with a different cutting machine, namely a machine with one blade that moved longitudinally along the twisted filament between cutting strokes and that was controlled with a computer to make the various cuts for the escarpment of the barbs. These other barbed sutures were also tested for straight pull tensile strength and for chamois cloth closure strength. (A discussion of how chamois cloth closure strength is performed can be seen below in connection with Figures 13A and 13B.) The results for these other barbed sutures are summarized in the following Tables 7K-7Z.

Paragraph [0151] has been amended as follows:

[0151]

Table 7K (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	152.6	0.718	not applicable
cut depth D	mm	0.221	0.011	0.48
cut length L	mm	0.479	0.022	1.05
cut distance P	mm	0.784	0.015	1.71
spirality angle α	degrees	12.9	0.453	not applicable

Table 7L (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	152.4	0.947	not applicable
cut depth D	mm	0.216	0.014	0.47
cut length L	mm	0.465	0.024	1.02
cut distance P	mm	0.774	0.015	1.69
spirality angle α	degrees	13.2	0.349	not applicable

Table 7M (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	152.3	0.576	not applicable
cut depth D	mm	0.227	0.015	0.50
cut length L	mm	0.489	0.034	1.07
cut distance P	mm	0.796	0.018	1.74
spirality angle α	degrees	13.1	0.193	not applicable

Table 7N (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	152.8	0.612	not applicable
cut depth D	mm	0.207	0.007	0.45

cut length L	mm	0.453	0.016	0.99
cut distance P	mm	0.798	0.017	1.75
spirality angle α	degrees	13.6	0.560	not applicable

Table 7O (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over [Sutur] Suture Diameter (0.457 mm)
cut angle Θ	degrees	152.9	0.549	not applicable
cut depth D	mm	0.188	0.016	0.41
cut length L	mm	0.413	0.030	0.90
cut distance P	mm	0.787	0.024	1.72
spirality angle α	degrees	13.8	0.270	not applicable

Table 7P (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	153.1	0.655	not applicable
cut depth D	mm	0.204	0.007	0.45
cut length L	mm	0.451	0.019	0.99
cut distance P	mm	0.792	0.018	1.73
spirality angle α	degrees	13.6	0.410	not applicable

Table 7Q (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	163.1	0.505	not applicable
cut depth D	mm	0.245	0.013	0.54
cut length L	mm	0.842	0.045	1.84
cut distance P	mm	0.774	0.009	1.69
spirality angle α	degree	10.8	0.449	not applicable

Table 7R (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	161.1	1.126	not applicable

cut depth D	mm	0.233	0.017	0.51
cut length L	mm	0.721	0.035	1.58
cut distance P	mm	0.773	0.010	1.69
spirality angle α	degrees	12.6	0.189	not applicable

Table 7S (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	160.9	0.708	not applicable
cut depth D	mm	0.240	0.014	0.52
cut length L	mm	0.734	0.037	1.61
cut distance P	mm	0.774	0.009	1.69
spirality angle α	degrees	13.6	0.312	not applicable

Table 7T (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	154.6	1.434	not applicable
cut depth D	mm	0.210	0.009	0.46
cut length L	mm	0.492	0.026	1.08
cut distance P	mm	0.538	0.011	1.18
spirality angle α	degrees	12.3	0.223	not applicable

Table 7U (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	152.9	0.809	not applicable
cut depth D	mm	0.212	0.014	0.46
cut length L	mm	0.464	0.026	1.01
cut distance P	mm	0.530	0.015	1.16
spirality angle α	degrees	13.7	0.411	not applicable

Table 7V (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	153.4	0.903	not applicable
cut depth D	mm	0.221	0.010	0.48
cut length L	mm	0.495	0.023	1.08
cut distance P	mm	0.537	0.012	1.17
spirality angle α	degrees	13.9	0.605	not applicable

Table 7W (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	155.2	0.829	not applicable
cut depth D	mm	0.202	0.008	0.44
cut length L	mm	0.483	0.017	1.06
cut distance P	mm	0.789	0.031	1.73
spirality angle α	degrees	12.6	0.328	not applicable

Table 7X (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	155.5	0.799	not applicable
cut depth D	mm	0.200	0.010	0.44
cut length L	mm	0.484	0.027	1.06
cut distance P	mm	0.798	0.017	1.75
spirality angle α	degrees	11.8	0.362	not applicable

Table 7Y (size 0 barbed suture)

Measurement	Units	Average	Standard Deviation	Ratio of D, L, or P over Suture Diameter (0.457 mm)
cut angle Θ	degrees	155.4	0.560	not applicable
cut depth D	mm	0.196	0.008	0.43
cut length L	mm	0.471	0.017	1.03
cut distance P	mm	0.799	0.019	1.75
spirality angle α	degrees	11.8	0.496	not applicable

Table 7Z

Barbed Suture	Straight Pull Strength (pounds)	Chamois Cloth Closure Strength (pounds to rupture)
Sample 1 (Tables 7K - 7M)	7.29	11.23
Sample 2 (Tables 7N - 7P)	8.73	12.14
Sample 3 (Tables 7Q - 7S)	8.5	9.22
Sample 4 (Tables 7T - 7V)	5.92	9.27
Sample 5 (Tables 7W - 7Y)	7.69	9.97

Although all the above-noted measurements were performed on bi-directional, twist cut, multiple spiral barbed sutures, the below-noted desirable ranges for measurements for barb length L, barb cut depth D, barb cut angle Θ , and/or cut distance P should be the same for the various other inventive barbed sutures described here.